

1 CLAIM:

1. A self-wound, water dissolvable, tape.
2. A tape according to claim 1 comprising a water dissolvable,  
5 continuous phase substrate having a first surface and a second surface.
3. A tape according to claim 2 including a water dissolvable,  
continuous phase adhesive layer on the first surface of the substrate.
- 10 4. A tape according to claim 3 including a water dissolvable,  
continuous phase abherent layer on the second surface of the substrate.
5. A tape according to claim 2 wherein the substrate includes a  
water insoluble, discontinuous phase.
- 15 6. A tape according to claim 3 wherein the adhesive layer  
includes a water insoluble, discontinuous phase.
7. A tape according to claim 4 wherein the abherent layer  
20 includes a water insoluble discontinuous phase.
8. A tape according to claim 2 wherein the substrate is at least  
one organic compound incorporating one or more high polarity functional  
groups.
- 25 9. A tape according to claim 8 wherein the polar functional  
groups include an acid functionality.
10. A tape according to claim 8 wherein the polar functional  
30 groups include an alcohol functionality.

11. A tape according to claim 8 wherein the polar functional groups include a ketone functionality.

5 12. A tape according to claim 8 wherein the polar functional groups include an aldehyde functionality.

13. A tape according to claim 8 wherein the polar functional groups include an ester linkage.

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14. A tape according to claim 2 wherein the water dissolvable, continuous phase substrate comprises a soluble starch.

15 15. A tape according to claim 3 wherein the water dissolvable, continuous phase adhesive layer comprises an ionic salt of a polyacrylic acid.

16. A tape according to claim 4 wherein the water dissolvable, continuous phase adherent layer comprises lecithin.

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17. A tape according to claim 2 wherein the substrate includes a water insoluble, discontinuous phase of cellulose fibers.

25 18. A tape according to claim 3 wherein the adhesive layer includes a water insoluble, discontinuous phase of a high molecular weight acrylic acid.

19. A tape according to claim 4 wherein the adherent layer includes a water insoluble discontinuous phase of polymethyl siloxane.

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20. A tape according to claim 14 wherein the soluble starch comprises cationic corn starch.

21. A roll of water dissolvable, self-wound tape comprising a first  
5 adherent layer comprising a first, water dissolvable, continuous phase and  
a second, non-dissolvable, discontinuous phase, a second substrate layer  
comprising a first, water dissolvable, continuous phase and a second,  
non-dissolvable, discontinuous phase, and a third layer comprising a  
water dissolvable pressure sensitive adhesive continuous phase and a  
10 second, non-dissolvable, discontinuous phase wound upon a core.

22. A roll according to claim 21 wherein the water dissolvable  
continuous phase of the adherent layer comprises lecithin, and the  
discontinuous, non-dissolvable, discontinuous phase comprises  
15 polymethyl siloxane; the water dissolvable continuous phase of the  
substrate layer comprises a soluble starch, and the nondissolvable  
discontinuous phase comprises an ionic salt of poly-acrylic acid and the  
non-dissolvable, discontinuous phase comprises a nondissolvable, higher  
molecular weight acrylic acid.

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